```
FILE 'HOME' ENTERED AT 13:48:01 ON 02 MAY 2007

=> ile reg
ILE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 13:48:08 ON 02 MAY 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:     1 MAY 2007  HIGHEST RN 934050-43-8
DICTIONARY FILE UPDATES:    1 MAY 2007  HIGHEST RN 934050-43-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\xanthine.str

L1      STRUCTURE UPLOADED

=> s l1 fam sam
SAMPLE SEARCH INITIATED 13:49:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -        1 TO ITERATE

100.0% PROCESSED         1 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:            1 TO       80
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA FAM SAM L1

=> s l1 fam full
FULL SEARCH INITIATED 13:49:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -       58 TO ITERATE

100.0% PROCESSED        58 ITERATIONS                               12 ANSWERS
SEARCH TIME: 00.00.01
```
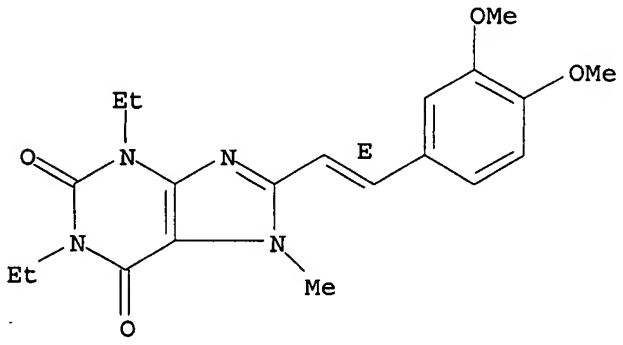

L3 12 SEA FAM FUL L1

=> d scan

L3 12 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 1H-Purine-2,6-dione, 8-[(1E)-2-(3,4-dimethoxyphenyl)ethenyl]-1,3-diethyl-3,7-dihydro-7-methyl-, hexahydrate (9CI)
MF C20 H24 N4 O4 . 6 H2 O

Double bond geometry as shown.



●6 H_2O

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	68.60	68.81

FILE 'CAPLUS' ENTERED AT 13:49:38 ON 02 MAY 2007

FILE COVERS 1907 - 2 May 2007 VOL 146 ISS 19
FILE LAST UPDATED: 1 May 2007 (20070501/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

=> s l3
L4 83 L3

```
=> s anxiety
         16873 ANXIETY
            48 ANXIETIES
L5       16908 ANXIETY
                (ANXIETY OR ANXIETIES)

=> s anxiet? or anxio?
         16912 ANXIET?
         13439 ANXIO?
L6       22647 ANXIET? OR ANXIO?

=> s l4 and l6
L7           1 L4 AND L6

=> d ti au abs so py

L7   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   A method using an adenosine A2A receptor antagonist for treating an
     anxiety disorder
IN   Kase, Hiroshi; Seno, Naoki; Shiozaki, Shizuo; Kobayashi, Minoru; Kase,
     Junya
AB   Anxiety disorders, such as panic disorder, agoraphobia,
     obsessive-compulsive disorder, social phobia, post-traumatic stress
     disorder, generalized anxiety disorder, specific phobia, or the
     like, are treated by administering an effective amount of at least one
     adenosine A2A receptor antagonist (e.g. a xanthine derivative) to a patient in
     need thereof, optionally in combination with an anxiolytic(s)
     other than the adenosine A2A receptor antagonist.
SO   PCT Int. Appl., 96 pp.
     CODEN: PIXXD2
PY   2004
     2004
     2004
     2006
     2006
     2006
     2006
     2006
     2005


=> s phob? or stress
          2354 PHOB?
        531845 STRESS
         95856 STRESSES
        570322 STRESS
                 (STRESS OR STRESSES)
L8      572256 PHOB? OR STRESS

=> s l4 and l8
L9           1 L4 AND L8

=> d ti au abs so py 1-10 l4

L4   ANSWER 1 OF 83  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Compositions and methods for inhibiting neurodegeneration
IN   Kalb, Robert Gordon; Mojsilovic-Petrovic, Jelena
AB   Methods effective for inhibiting neuronal degeneration, particularly in
     amyotrophic lateral sclerosis (ALS) patients are disclosed.  Also provided
     are screening assays for identifying such agents.
SO   U.S. Pat. Appl. Publ., 36pp.
     CODEN: USXXCO
PY   2007
```

L4 ANSWER 2 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN
TI Forebrain adenosine A2A receptors contribute to L-3,4-dihydroxyphenylalanine-induced dyskinesia in hemiparkinsonian mice
AU Xiao, Danqing; Bastia, Elena; Xu, Yue-Hang; Benn, Caroline L.; Cha, Jang-Ho J.; Peterson, Tracy S.; Chen, Jiang-Fan; Schwarzschild, Michael A.
AB Adenosine A2A receptor antagonists provide a promising nondopaminergic approach to the treatment of Parkinson's disease (PD). Initial clin. trials of A2A antagonists targeted PD patients who had already developed treatment complications known as L-3,4-dihydroxyphenylalanine (L-DOPA)-induced dyskinesia (LID) in an effort to improve symptoms while reducing existing LID. The goal of this study is to explore the effect of A2A antagonists and targeted A2A receptor depletion on the actual development of sensitized responses to L-DOPA in mouse models of LID in PD. Hemiparkinsonian mice (unilaterally lesioned with 6-OHDA) were treated daily for 3 wk with a low dose of L-DOPA (2 mg/kg) preceded by a low dose of selective A2A antagonist (KW-6002 [(E)-1,3-diethyl-8-(3,4-dimethoxystyryl)-7-methyl-3,7-dihydro-1H-purine-2,6-dione] at 0.03 or 0.3 mg/kg, or SCH58261 [5-amino-7-(2-phenylethyl)-2-(2-furyl)-pyrazolo[4,3-e]-1,2,4-triazolo[1,5-c]pyrimidine] at 0.03 mg/kg) or vehicle i.p. In control mice, contralateral rotational responses to daily L-DOPA gradually increased over the initial week before reaching a persistent maximum Both A2A antagonists inhibited the development of sensitized contralateral turning, with KW-6002 pretreatment reducing the sensitized rotational responses by up to threefold. The development of abnormal involuntary movements (a measure of LID) as well as rotational responses was attenuated by the postnatal depletion of forebrain A2A receptors in conditional (Cre/loxP system) knock-out mice. These pharmacol. and genetic data provide evidence that striatal A2A receptors play an important role in the neuro-plasticity underlying behavioral sensitization to L-DOPA, supporting consideration of early adjunctive therapy with an A2A antagonist to reduce the risk of LID in PD.
SO Journal of Neuroscience (2006), 26(52), 13548-13555
CODEN: JNRSDS; ISSN: 0270-6474
PY 2006

L4 ANSWER 3 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN
TI Identification of non-furan containing A2A antagonists using database mining and molecular similarity approaches
AU Richardson, Christine M.; Gillespie, Roger J.; Williamson, Douglas S.; Jordan, Allan M.; Fink, Alexandra; Knight, Antony R.; Sellwood, Daniel M.; Misra, Anil
AB Database searching led to the identification of potent A2A antagonists which do not contain the privileged furan moiety and which show selectivity over A1 receptors. Simple substructure searching on a proprietary database identified compds. with activities in the low nM range. A targeted approach to the identification of non-furan containing compds. resulted in the identification of two novel series, with potency, selectivity and directional SAR from screening 113 compds.
SO Bioorganic & Medicinal Chemistry Letters (2006), 16(23), 5993-5997
CODEN: BMCLE8; ISSN: 0960-894X
PY 2006

L4 ANSWER 4 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN
TI Novel neuroprotection by caffeine and adenosine A2A receptor antagonists in animal models of Parkinson's disease
AU Kalda, Anti; Yu, Liqun; Oztas, Emin; Chen, Jiang-Fan
AB A review. The adenosine A2A receptor has recently emerged as a leading non-dopaminergic therapeutic target for Parkinson's disease, largely due to the restricted distribution of the receptor in the striatum and the profound interaction between adenosine and dopamine receptors in brain. Two lines of research in particular have demonstrated the promise of the A2A receptor antagonists as novel anti-parkinsonian drugs. First, building on extensive preclin. animal studies, the A2A receptor antagonist

KW6002 has demonstrated its potential to increase motor activity in PD patients of the advanced stage in a recent clin. phase IIB trial. Second, recently two prospective epidemiol. studies of large cohorts have firmly established the inverse relationship between the consumption of caffeine (a non-specific adenosine antagonist) and the risk of developing PD. The potential neuroprotective effect of caffeine and A2A receptor antagonists in PD is further substantiated by the demonstration that pharmacol. blockade (by caffeine or specific A2A antagonists) or genetic depletion of the A2A receptor attenuated dopaminergic neurotoxicity and neurodegeneration in animal models of PD. Moreover, A2A receptor antagonism-mediated neuroprotection goes beyond PD models and can be extended to a variety of other brain injuries induced by stroke, excitotoxicity and mitochondrial toxins. Intensive investigations are under way to dissect out common cellular mechanisms (such as A2A receptor modulation of neuroinflammation) which may underlie the broad spectrum of neuroprotection by A2A receptor inactivation in brain.

SO Journal of the Neurological Sciences (2006), 248(1-2), 9-15
CODEN: JNSCAG; ISSN: 0022-510X

PY 2006

L4 ANSWER 5 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Protecting motor neurons from toxic insult by antagonism of adenosine A2a and Trk receptors. [Erratum to document cited in CA145:411022]

AU Mojsilovic-Petrovic, Jelena; Jeong, Goo-Bo; Crocker, Amanda; Arneja, Amrita; David, Samuel; Russell, David S.; Kalb, Robert G.

AB The name of the sixth author, David S. Russell, was given incorrectly as "David Russell".

SO Journal of Neuroscience (2006), 26(40), No pp. given
CODEN: JNRSDS; ISSN: 0270-6474

PY 2006

L4 ANSWER 6 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Protecting motor neurons from toxic insult by antagonism of adenosine A2a and Trk receptors

AU Mojsilovic-Petrovic, Jelena; Jeong, Goo-Bo; Crocker, Amanda; Arneja, Amrita; David, Samuel; Russell, David; Kalb, Robert G.

AB The death of motor neurons in amyotrophic lateral sclerosis (ALS) is thought to result from the interaction of a variety of factors including excitotoxicity, accumulation of toxic proteins, and abnormal axonal transport. Previously, we found that the susceptibility of motor neurons to excitotoxic insults can be limited by inhibiting signals evoked by brain-derived neurotrophic factor (BDNF) activation of the receptor tyrosine kinase B (TrkB). Here we show that this can be achieved by direct kinase inhibition or by blockade of a transactivation pathway that uses adenosine A2a receptors and src-family kinases (SFKs). Downstream signaling cascades (such as mitogen-activated protein kinase and phosphatidylinositol-3 kinase) are inhibited by these blockers. In addition to protecting motor neurons from excitotoxic insult, these agents also prevent toxicity that follows from the expression of mutant proteins (G85R superoxide dismutase 1; G59S p150glued) that cause familial motor neuron disease. TrkB, adenosine A2a receptors, and SFKs associate into complexes in lipid raft and nonlipid raft membranes and the signaling from lipids rafts may be particularly important because their disruption by cholesterol depletion blocks the ability of BDNF to render motor neurons vulnerable to insult. The neuroprotective versatility of Trk antagonism suggests that it may have broad utility in the treatment of ALS patients.

SO Journal of Neuroscience (2006), 26(36), 9250-9263
CODEN: JNRSDS; ISSN: 0270-6474

PY 2006

L4 ANSWER 7 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Assay development and screening of a serine/threonine kinase in an on-chip mode using caliper nanofluidics technology

AU Perrin, Dominique; Fremaux, Christele; Scheer, Alexander

AB Kinases are key targets for drug discovery. In the field of screening in general and especially in the kinase area, because of considerations of efficiency and cost, radioactivity-based assays tend to be replaced by alternative, mostly fluorescence-based, assays. Today, the limiting factor is rarely the number of data points that can be obtained but rather the quality of the data, enzyme availability, and cost. In this article, the authors describe the development of an assay for a kinase screen based on the electrophoretic separation of fluorescent product and substrate using a Caliper-based nanofluidics environment in on-chip incubation mode. The authors present the results of screening a focused set of 32,000 compds. together with confirmation data obtained in a filtration assay. In addition, they have made a small-scale comparison between the on-chip and off-chip nanofluidics screening modes. In their hands, the screen in on-chip mode is characterized by high precision most likely due to the absence of liquid pipetting; an excellent confirmation rate (62%) in an independent assay format, namely, filtration; and good sensitivity. This study led to the identification of 4 novel chemical series of inhibitors.

SO Journal of Biomolecular Screening (2006), 11(4), 359-368
CODEN: JBISF3; ISSN: 1087-0571

PY 2006

L4 ANSWER 8 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Adenosine A2a receptor antagonists for the treatment of extra-pyramidal syndrome and other movement disorders

IN Grzelak, Michael; Hunter, John; Pond, Annamarie; Varty, Geoffrey

AB A method for the treatment or prevention of extra pyramidal syndrome (EPS), dystonia, restless legs syndrome (RLS) or periodic leg movement in sleep (PLMS) comprising the administration of an adenosine A2a receptor antagonist, alone or in combination with other agents is described. Pharmaceutical compns. consisting of an adenosine A2a receptor antagonist in combination with an antipsychotic agent, an anticonvulsant agent, lithium or an opioid are also provided. Thus, monkeys, previously sensitized to the chronic effects of haloperidol, that exhibited EPS when administered haloperidol acutely, were used in a crossover, balanced design study to evaluate adenosine A2a receptor antagonist administered orally, in conjunction with haloperidol. The adenosine A2a receptor antagonist studied prevented the onset of EPS and delayed the onset of EPS by an average of 2.3 to 2.9 h.

SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 234,644.
CODEN: USXXCO

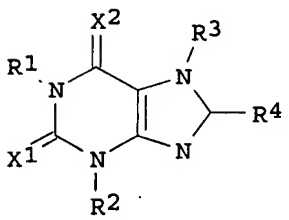
PY 2006
2004
2005
2005
2005
2005
2006
2006
2007

L4 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Preventive and/or therapeutic agent for drug dependence

IN Kase, Junya; Kurokawa, Masako; Shiozaki, Shizuo; Seno, Naoki

GI



I

AB A preventive and/or therapeutic agent for drug dependence which contains as an active ingredient either a compound having antagonistic activity against an adenosine A2A receptor, such as a xanthine derivative represented by, e.g., the formula (I) (wherein R1, R2, and R3 are the same or different and each represents hydrogen, lower alkyl, lower alkenyl, or lower alkynyl; R4 represents cycloalkyl, -(CH2)n-R5, or the -C(Y1):C(Y2)Z; and X1 and X2 are the same or different and each represents oxygen or sulfur) or a pharmacol. acceptable salt of the compound

SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2

PY 2006

L4 ANSWER 10 OF 83 CAPLUS COPYRIGHT 2007 ACS on STN

TI Adenosine A2a receptor antagonists for the treatment of extrapyramidal syndrome and other movement disorders

IN Grzelak, Michael; Hunter, John; Pond, Annamarie; Varty, Geoffrey

AB The invention discloses a method for the treatment or prevention of extrapyramidal syndrome (EPS), dystonia, restless legs syndrome (RLS) or periodic leg movement in sleep (PLMS), comprising the administration of an adenosine A2a receptor antagonist, alone or in combination with other agents useful for treating EPS, dystonia, RLS or PLMS.

SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 738,906.
CODEN: USXXCO

PY 2006
2004
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